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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/993,374 | 11/14/2001 | Michael S. Jensen | ECO3 | 5761 |

7590

07/02/2003

Mr. Keith Christian
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EXAMINER

THOMPSON, CAMIE S

| | |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1774

DATE MAILED: 07/02/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,374

Applicant(s)

JENSEN ET AL.

Examiner

Camie S Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Bair, U.S.

Patent Number 3,775,916.

Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units principally load-bearing layer of cementitious material and an insulating layer as per instant claim 1 (see abstract). Additionally, the reference discloses that frame members are mounted to the edges of one or more panels to unify the structure as per instant claim 1 (see abstract). The Bair reference also discloses that the disposed beams are along the upper and lower sides of the panel and encompass the insulating layer as per instant claim 4 (see Figure 4, column 1, lines 51-68 and column 2, line 55-column 3, line 5). Figure 4 of the reference discloses a reinforcing bar as numbered 24 strengthens each beam as per instant claim 7.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916.

Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units principally load-bearing layer of cementitious material and an insulating layer as per instant claim 1 (see abstract). Additionally, the reference discloses that frame members are mounted to the edges of one or more panels to unify the structure as per instant claim 1 (see abstract). The reference does not disclose that the predetermined thickness of the first and second face panels is between 0.375 to 1.0 inches. However, the reference does disclose that the sizes are not critical to the panel (see column 4, lines 58-61). The thicknesses of the first and second panels affect the load bearing features of the sandwich construction. Discovery of optimum values of a result effective variable only involves routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA). Therefore, it would have been obvious to one of ordinary skill in the art to have the thickness of the first and second panels be between 0.375 to 1 inch in order to provide a wall panel that is lightweight but yet is able to sustain heavy loads. The reference does disclose that the panel was square and measures 10 feet on a side and four inches in thickness as per instant claim 3 (see column 4, lines 59-68). The width of the panel is not disclosed in the reference. The width of the panel affects the erection of the panel.

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Discovery of optimum values of a result effective variable only involves routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA). Therefore, it would have been obvious to one of ordinary skill in the art to have a sandwich panel with a width of greater than 8 feet so that the panel can be erected in either residential and/or commercial buildings. Additionally, Bair does not disclose that the insulation material comprises at least one rigid block of insulation. The reference does disclose in column 2, lines 55-60 that any suitable insulating material can be used. A rigid block of insulation affects the strength of the panel. Therefore, it would have been obvious to one of ordinary skill in the art to use a rigid block of insulation in order to have great load bearing capabilities as per instant claim 10.

5. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916 in view of Rizk, U.S. Patent Number 4,620,404.

Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units principally load-bearing layer of cementitious material and an insulating layer as per instant claim 1 (see abstract). Additionally, the reference discloses that frame members are mounted to the edges of one or more panels to unify the structure as per instant claim 1 (see abstract). The Bair reference also discloses that the disposed beams are along the upper and lower sides of the panel and encompass the insulating layer as per instant claim 4 (see Figure 4, column 1, lines 51-68 and column 2, line 55-column 3, line 5). The Bair reference does not disclose a support frame with one or more ribs extending the length of the lower and upper border beams as per instant claim 5. Rizk teaches a building panel produced from reinforced concrete and has a support structure (see abstract). Rizk teaches that the support frame serves as the load bearing support element wherein connectors are secured to the frame,

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preferably at the lower and upper portions of the panel as per instant claim 5 (see column 4, lines 5-19). Additionally, Rizk teaches that the connector means are provided by adjacent rib portions that extend along the peripheries of the panel as per instant claim 5 (see column 4, lines 47-68).

The ribs provide unitary construction. Therefore, it would have been obvious to one of ordinary skill in the art to have ribs extending between the lower and upper portion of the panel in order to provide a modular construction that is unitary in structure as shown by Rizk in column 4, lines 5-15). Neither reference provides the width of the beams and ribs as per instant claim 6. However,

Bair does disclose that the sizes are not critical to the panel and the panel was measured at four inches in thickness as per instant claim 6. However, claims 5 and 6 of the Rizk reference teaches that the ribs extend along the width of the upper and lower portions of the support frame. The ribs secure the framework of the panel. Therefore, it would have been obvious to one of ordinary skill in the art to have the width of the beams of about 4 inches since the panel is about 4 inches and to have each of the ribs have a width of 2.5 in order to secure the framework.

6. Claims 1, 4 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916 in view of Siler, U.S. Patent 5,826,389.

Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units principally load-bearing layer of cementitious material and an insulating layer as per instant claim 1 (see abstract). Additionally, the reference discloses that frame members are mounted to the edges of one or more panels to unify the structure as per instant claim 1 (see abstract). The Bair reference also discloses that the disposed beams are along the upper and lower sides of the panel and encompass the insulating layer as per instant claim 4 (see Figure 4, column 1, lines 51-68 and column 2, line 55-column 3, line 5). Figure 4 of

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the reference discloses a reinforcing bar as numbered 24 strengthens each beam as per instant claim 9. Bair does not disclose that a sill beam extends between the first and second jamb beams in the support frame or a header beam extending between the first and second jamb beams as per instant claim 8. Siler teaches a building structure that includes a panel (see abstract and column 2, lines 56-64). Figure 8 of the Siler reference teaches that header and sill beams can be within the framing members of the structure, which include two jambs (also see column 6, lines 42-49). The header and sill beams anchor the support framework. Therefore, it would have been obvious to one of ordinary skill in the art have the sill beam and a header beam extend between the first and second jamb of the Bair construction in order to position the panel (see Siler: column 6, lines 42-49).

7. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair, U.S. Patent Number 3,775,916 in view of Schupack, U.S. Patent Number 4,617,219.

Bair discloses a multi-layer wall panel that has a sandwich construction comprising an outer layer of masonry building units principally load-bearing layer of cementitious material and an insulating layer as per instant claim 1 (see abstract). Additionally, the reference discloses that frame members are mounted to the edges of one or more panels to unify the structure as per instant claim 1 (see abstract). The Bair reference does not disclose the cementitious mixture as per instant claim 11. Schupak teaches reinforced cement structures such as panels in the sandwich construction (see abstract and column 1, lines 36-47). The Schupak reference also teaches the composition of the cementitious mixture. Schupak teaches that the composition can include a polypropylene fiber, cement, sand, water and superplasticizer (see column 4, lines 1- 5 and Example 2. Schupak does not disclose the amounts instantly claimed. The use of a

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lightweight, high compression strain capacity cement matrix provides bendability characteristics. Discovery of optimum values of a result effective variable involve only routine skill in the art in re Boesch, 617 F2. 2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have a cementitious mixture composition with 42/3% cement, 42.3% sand, 1% polypropylene fiber, 0.1% superplasticizer and about 14.3% water in order to provide high compression strength (see column 11, lines 29-43 of the Schupak reference).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone numbers for the Group are (703) 872-9310 {before finals} and (703) 872-9311 {after finals}.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

